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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,669	03/26/2001	George J. Hudak	10003916-1	9797

7590 03/10/2003

AGILENT TECHNOLOGIES, INC.
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EXAMINER	
MACCHIAROLO, PETER J	
ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 03/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/817,669	HUDAK, GEORGE J.	
	Examiner	Art Unit	
	Peter J Macchiarolo	2875	

-- The MAILING DATE of this communication appears on the cover sh et with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-15 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-15 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The reply filed on January 27, 2003 consists of changes to the claims, and remarks related to the prior rejection of claims in the First Office Action. However, claims 1-5, 7-15, and 17-20 are not allowable as explained below.

Drawings

2. The drawings are objected to because reference number 41 and 41' point out o-rings in figure 2. While 41' does appear to be an o-ring, 41 does not. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, 9, 12-15, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al (USPN 4,482,246; henceforth "Meyer").

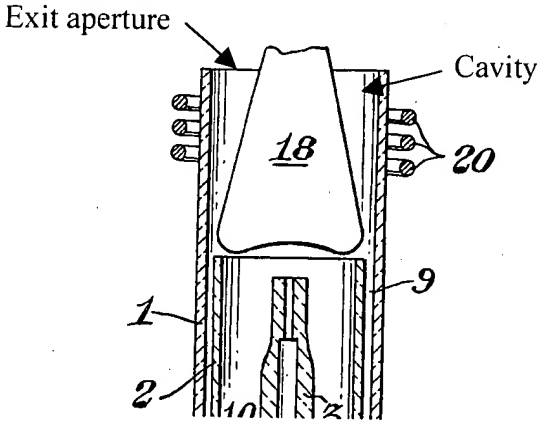
In regards to claims 1, 9, and 13, Meyer discloses in figure 2 and column 4 lines 34-43, an air-cooled gas discharge detector comprises a containing tube (1) that can be made from alumina, an air passageway (9) in contact with at least a portion of the outer surface of the gas

discharge tube, an entry aperture (8) for introducing air into the air passageway, an exit aperture (below) for allowing air to flow out of the air passageway, and an air source for supply a flow of air into the entry aperture for cooling the outer surface of the gas discharge tube.

Meyer is silent to the tube being made from sapphire.

However, it is well known in the art that alumina is any of several forms of aluminum oxide, Al_2O_3, including sapphire. It is further known in the art that sapphire is extremely resilient and a good conductor of heat, which allows for efficient cooling.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the gas discharge detector of Meyer, including a sapphire gas discharge tube, since it is well known in the art that alumina is a form of sapphire which is extremely resilient and a good conductor of heat, which allows for efficient cooling.



In regards to claims 2-5, 12, 14-15, and 19-20, Meyer teaches all of the recited limitations of claims 1, 9, and 13 (above). Meyer further teaches in column 3 lines 3-10, that the discharge

(18) is powered by radio frequency source. Meyer further teaches in figure 2 that the radio frequency is introduced into a cavity (above), defined by an inner wall (3), two side walls (2) and an outer wall (1) and the air passageway extends alongside at least a portion of an exterior of the side walls.

Meyer is silent to the radio frequency being generated by a magnetron.

However, it is well known in the art that a conventional magnetron may be utilized for the microwave power source, and the magnetron is more capable of producing suitable power, and it can be easily employed with great success.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the air cooled detector of Meyer, including a magnetron, since it is well known in the art that a magnetron is more capable of producing suitable power, and it can be easily employed with great success.

4. Claims 7-8, 10-11, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al (USPN 4,482,246) in view of Okamoto et al. (USPN 5,086,255; henceforth "Okamoto").

In regards to claims 7-8, 10-11, and 17-18, Meyer teaches all of the recited limitations of claim 5 (above).

Meyer is silent to the exact air source used to supply the cooling air.

However, Okamoto teaches in column 3 lines 10-13, that an air source to supply cooling air is required to produce "high-pressure air" to efficiently cool the tube. Although Okamoto is silent to the exact air source, it is extremely well known in the art that an air pump or a central

compressor are both suitable air sources capable of producing high-pressure air to efficiently cool the tube.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the detector of Meyer, including an air pump or central compressor, since Okamoto teaches an air source to supply cooling air is required to produce "high-pressure air" to efficiently cool the tube, and it is extremely well known in the art that an air pump or a central compressor are suitable air sources capable of producing high-pressure air to efficiently cool the tube.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 9, and 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,263,830 filed April 11, 2000 to Kamarehi et al. (henceforth "Kamarehi"), discloses a plasma generator configuration that can be interpreted to read on Applicant's instant claim language. Further, U.S. Patent 5,051,557 to Satzger discloses a microwave plasma torch which is cooled by a liquid. Satzger may also be interpreted to read on the majority of Applicant's instant claims. However, neither of these references are relied upon in this office action.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198. The examiner can normally be reached on 7.30 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm
March 3, 2003

Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800